



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/827,317

04/20/2004

Hidekazu Moriyama

119294

2578

25944 7590 02/07/2008

OLIFF & BERRIDGE, PLC

P.O. BOX 320850

ALEXANDRIA, VA 22320-4850

EXAMINER

LIN, JAMES

ART UNIT

PAPER NUMBER

1792

MAIL DATE

DELIVERY MODE

02/07/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/827,317	Applicant(s) MORIYAMA, HIDEKAZU	
	Examiner Jimmy LIN	Art Unit 1792	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 November 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2 and 4-7 is/are pending in the application.
- 4a) Of the above claim(s) 6 and 7 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,4 and 5 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

2. Claims 1 and 3-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miyashita et al. (U.S. Publication 2001/0001050) in view of Igari et al. (JP 10-337882, as provided by the Applicant) and Watanabe et al. (U.S. Patent 4,966,480).

The rejection is cited in the Office Action filed 2/22/2007.

3. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Miyashita '050 in view of Igari '882 and Watanabe '480 as applied to claim 1 above, and in further view of Ozaki et al. (JP 60-139454).

The rejection is cited in the Office Action filed 2/22/2007.

4. Claims 1 and 3-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miyashita '050 in view of Naniwa et al. (U.S. Publication No. 2002/0038611) and Caren et al. (U.S. Publication No. 2003/0011656).

The rejection is cited in the Office Action filed 9/13/2007.

5. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Miyashita '050 in view of Naniwa '611 and Caren '656 as applied to claim 1 above, and further in view of Ozaki '454.

The rejection is cited in the Office Action filed 9/13/2007.

Response to Arguments

6. Applicant's arguments filed 7/18/2007 have been fully considered but they are not persuasive.

Claims rejected over Miyashita, Igari, Watanabe, and Ozaki:

Art Unit: 1792

Applicant argues on pg. 4-6 that a single cleaning step would have been sufficient and that one of ordinary skill in the art would not have been motivated to use three cleaning steps because to do so would provide no apparent benefit. However, the combination of references would suggest cleaning of an ink-jet system using a solvent in the functional solution. In the case of Miyashita, water can be a solvent used in the functional solution. Applicant seems to agree that the combination of references, at a minimum, would provide such a suggestion. Additionally, the combination of references would have reasonably suggested to one of ordinary skill in the art to have removed all of the ink residue in the cleaning process so that clogging of the ink-jet nozzle can be prevented. One of ordinary skill in the art would have recognized that the cleaning of the ink-jet system removes the residue and that additional cleaning steps would have further ensured the complete removal of all residue. Thus, cleaning the ink-jet system of Miyashita multiple times, e.g., at least 3 times, would have been an obvious modification.

Applicant argues on pg. 6-7 that Miyashita does not disclose water as a cleaning liquid. However, Miyashita does disclose water as a suitable solvent for ink-jetting PPV while Watanabe teaches that a solvent in the functional solution can be used as the particular cleaning solvent. Thus, the combination of Miyashita and Watanabe would reasonably suggest to one of ordinary skill in the art to have used water as the particular cleaning solvent.

Claims rejected over Miyashita, Naniwa, Caren, and Ozaki:

Applicant argues on pg. 9 that Naniwa does not disclose using a solvent from the functional solution in paragraph [0185], as alleged in the Office Action. However, Naniwa teaches cleaning with an ink solvent. The ink is the functional composition, and the ink solvent is the solvent used with the functional composition to thereby form a functional solution. Thus, Naniwa teaches cleaning with a solvent in the functional solution.

Applicant argues on pg. 9 that paragraphs [0185] and [0199] of Naniwa in combination disclose only, at best, an apparatus that can only perform one or more steps of cleaning with the same, single solution. However, Applicant is directed to paragraph [0186] where Naniwa teaches that “[i]t is *also* found effective to flow a *cleaning solution* to the ink passage at the time of cleaning the ink passage” (emphasis added by Examiner), which differentiates from the teaching in paragraph [0185] of “circulating only an *ink solvent*” (emphasis added by Examiner).

Art Unit: 1792

Firstly, Naniwa distinguishes between a cleaning solvent and an ink solvent as being different because they are referred to differently. Naniwa never indicates that the cleaning solvent and the ink solvent are the same. Secondly, the term “also” in paragraph [0186] indicates that the flow of a cleaning solution is a different step from the circulation of the ink solvent as described in paragraph [0185]. Thirdly, Naniwa explicitly teaches in paragraph [0185] that cleaning methods can be used individually or in combination, suggesting that a multiple of cleaning steps can be used in combination with each other. Thus, Naniwa reasonably teaches (1) circulating solvent ink and (2) flowing cleaning solution in the method of cleaning an ink passage.

Applicant argues on pg. 10 that the cleaning steps of Caren would replace, not augment, the cleaning step of Naniwa and that the proposed combination of Miyashita, Naniwa, and Caren would only include the steps of (1) washing with the wash fluid of Caren and (2) rinsing with the rinse fluid of Caren. However, Naniwa does not provide a sufficient teaching as to what types of cleaning solutions can be used while Caren provides the suggestion of specific solvents that can be used as particular cleaning solutions operable for ink-jet systems. One of ordinary skill in the art would have looked to the teachings of Caren for guidance in order to find suitable solvents as the particular cleaning solutions of Naniwa. The teachings of Caren would *not* have replaced the circulation of solvent ink as taught in Naniwa because Naniwa already provides sufficient guidance as to the particular solvent that can be used in that particular cleaning step. Thus, the combination of references would reasonably suggest all the claimed steps.

Conclusion

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

Art Unit: 1792

however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jimmy LIN whose telephone number is (571)272-8902. The examiner can normally be reached on Monday thru Friday 8AM - 5:30PM

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tim Meeks can be reached on 571-272-1423. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Timothy H Meeks/
Supervisory Patent Examiner, Art Unit 1792

/J. L./
Examiner, Art Unit 1792